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Lab No : SCE/BBMP/HB/17/2020-2021 Date: 04.06.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

Client	: Executive Engineer, RR Nagar Division,BBMP, Bangalore.
Agency	: Sri. H B Rajendra, Contractor, Bangalore.
Name of the Work	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE - 2019-20-RRN DIV(03), BBMP, Bangalore.
Date of Testing	04.06.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.1	477.4
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.90	22.60
7. Bitumen content in %	4.58	4.52
8. Average	4.55	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	32.7	32.7	6.9	93.1	90 - 100
19	86.2	118.9	24.9	75.1	71 - 95
13.2	68.7	187.6	39.3	60.7	56 - 80
4.75	83.4	271	56.8	43.2	38 - 54
2.360	51.8	322.8	67.7	32.3	28 - 42
0.300	93.1	415.9	87.2	12.8	7 - 21
0.075	31.6	447.5	93.8	6.2	2 - 8

SIEVE SIZE	Test 2				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	31.9	31.9	6.7	93.3	90 - 100
19	76.8	108.7	22.8	77.2	71 - 95
13.2	64.5	173.2	36.3	63.7	56 - 80
4.75	84.2	257.4	53.9	46.1	38 - 54
2.360	71.9	329.3	69.0	31.0	28 - 42
0.300	94.6	423.9	88.8	11.2	7 - 21
0.075	24.2	448.1	93.9	6.1	2 - 8

Note:

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Lab No.: SCE/BBMP/HB/17/2020-2021

Date: 04.06.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

Client	: Executive Engineer, RR Nagar Division,BBMP, Bangalore.
Agency	: Sri. H B Rajendra, Contractor, Bangalore.
Name of the Work	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE - 2019-20-RRN-DIV(03), BBMP, Bangalore.
Date of Testing	04.06.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477	477.3
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23.00	22.70
7. Bitumen content in %	4.60	4.54
8. Average	4.57	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	34.7	34.7	7.3	92.7	90 - 100
19	84.6	119.3	25.0	75.0	71 - 95
13.2	65.1	184.4	38.7	61.3	56 - 80
4.75	83.7	268.1	56.2	43.8	38 - 54
2.360	53.1	321.2	67.3	32.7	28 - 42
0.300	95.6	416.8	87.4	12.6	7 - 21
0.075	31.5	448.3	94.0	6.0	2 - 8

SIEVE SIZE	Test 2				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	34.5	34.5	7.2	92.8	90 - 100
19	79.6	114.1	23.9	76.1	71 - 95
13.2	64.5	178.6	37.4	62.6	56 - 80
4.75	84.4	263	55.1	44.9	38 - 54
2.360	73.3	336.3	70.5	29.5	28 - 42
0.300	95.1	431.4	90.4	9.6	7 - 21
0.075	25.2	456.6	95.7	4.3	2 - 8

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Ref. No.: SCE/BBMP/HB/17/2020-2021 Date: 05.06.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

	: Executive Engineer, RR Nagar Division,BBMP, Bangalore.
	: Sri. H B Rajendra, Contractor, Bangalore.
Name of the Work	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE - 2019-20-RRN-DIV(03), BBMP, Bangalore.
Date of Testing	05.06.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.1	477.3
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.90	22.70
7. Bitumen content in %	4.58	4.54
8. Average	4.56	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	33.8	33.8	7.1	92.9	90 - 100
19	85.6	119.4	25.0	75.0	71 - 95
13.2	70.4	189.8	39.8	60.2	56 - 80
4.75	83.5	273.3	57.3	42.7	38 - 54
2.360	53.6	326.9	68.5	31.5	28 - 42
0.300	97.4	424.3	88.9	11.1	7 - 21
0.075	33.8	458.1	96.0	4.0	2 - 8

SIEVE SIZE	Test 2				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	34.5	34.5	7.2	92.8	90 - 100
19	79.5	114	23.9	76.1	71 - 95
13.2	66.8	180.8	37.9	62.1	56 - 80
4.75	86.4	267.2	56.0	44.0	38 - 54
2.360	73.2	340.4	71.3	28.7	28 - 42
0.300	97.2	437.6	91.7	8.3	7 - 21
0.075	24.3	461.9	96.8	3.2	2 - 8

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Ref No.: SCE/BBMP/HB/17/2020-2021 Date: 05.06.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

Client	: Executive Engineer, RR Nagar Division,BBMP, Bangalore.
Agency	: Sri. H B Rajendra, Contractor, Bangalore.
Name of the Work	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE - 2019-20-RRN-DIV(03), BBMP, Bangalore.
Date of Testing	05.06.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.5	477
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.50	23.00
7. Bitumen content in %	4.50	4.60
8. Average	4.55	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	34.1	34.1	7.1	92.9	90 - 100
19	82.6	116.7	24.4	75.6	71 - 95
13.2	68.7	185.4	38.8	61.2	56 - 80
4.75	83.1	268.5	56.2	43.8	38 - 54
2.360	53.6	322.1	67.5	32.5	28 - 42
0.300	95.1	417.2	87.4	12.6	7 - 21
0.075	31.2	448.4	93.9	6.1	2 - 8

SIEVE SIZE	Test 2				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	35.5	35.5	7.4	92.6	90 - 100
19	79.7	115.2	24.2	75.8	71 - 95
13.2	68.4	183.6	38.5	61.5	56 - 80
4.75	86.2	269.8	56.6	43.4	38 - 54
2.360	53.1	322.9	67.7	32.3	28 - 42
0.300	97.2	420.1	88.1	11.9	7 - 21
0.075	25.3	445.4	93.4	6.6	2 - 8

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Lab No: SCE/BBMP/HB/17/2020-2021 Date: 07.06.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

Client	: Executive Engineer, RR Nagar Division,BBMP, Bangalore
Agency	: Sri. H B Rajendra, Contractor, Bangalore.
Name of the Work	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE - 2019-20-RRN-DIV(03), BBMP, Bangalore.
Date of Testing	07.06.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.2	477.5
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.80	22.50
7. Bitumen content in %	4.56	4.50
8. Average	4.53	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	31.6	31.6	6.6	93.4	90 - 100
19	82.6	114.2	23.9	76.1	71 - 95
13.2	67.5	181.7	38.1	61.9	56 - 80
4.75	81.4	263.1	55.1	44.9	38 - 54
2.360	50.2	313.3	65.7	34.3	28 - 42
0.300	94.1	407.4	85.4	14.6	7 - 21
0.075	31.9	439.3	92.1	7.9	2 - 8

SIEVE SIZE	Test 2				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	32.8	32.8	6.9	93.1	90 - 100
19	79.6	112.4	23.5	76.5	71 - 95
13.2	64.8	177.2	37.1	62.9	56 - 80
4.75	84.1	261.3	54.7	45.3	38 - 54
2.360	73.7	335	70.2	29.8	28 - 42
0.300	94.2	429.2	89.9	10.1	7 - 21
0.075	26.6	455.8	95.5	4.5	2 - 8

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Lab No: SCE/BBMP/HB/17/2020-2021

Date: 07.06.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

Client	: Executive Engineer, RR Nagar Division,BBMP, Bangalore.
Agency	: Sri. H B Rajendra, Contractor, Bangalore.
Name of the Work	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE - 2019-20-RRN-DIV(03), BBMP, Bangalore.
Date of Testing	07.06.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477	477.4
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23.00	22.60
7. Bitumen content in %	4.60	4.52
8. Average	4.56	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	35.6	35.6	7.5	92.5	90 - 100
19	86.5	122.1	25.6	74.4	71 - 95
13.2	66.4	188.5	39.5	60.5	56 - 80
4.75	80.2	268.7	56.3	43.7	38 - 54
2.360	51.1	319.8	67.0	33.0	28 - 42
0.300	98.7	418.5	87.7	12.3	7 - 21
0.075	31.2	449.7	94.3	5.7	2 - 8

SIEVE SIZE	Test 2				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	34.7	34.7	7.3	92.7	90 - 100
19	79.5	114.2	23.9	76.1	71 - 95
13.2	64.1	178.3	37.3	62.7	56 - 80
4.75	86.2	264.5	55.4	44.6	38 - 54
2.360	73.8	338.3	70.9	29.1	28 - 42
0.300	94.2	432.5	90.6	9.4	7 - 21
0.075	24.1	456.6	95.6	4.4	2 - 8

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No: SCE/BBMP/HB/17/2020-2021 Date: 08.06.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

	: Executive Engineer, RR Nagar Division,BBMP, Bangalore.
	: Sri. H B Rajendra, Contractor, Bangalore.
Name of the Work	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE - 2019-20-RRN-DIV(03), BBMP, Bangalore.
Date of Testing	08.06.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	476.9	477.3
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23.10	22.70
7. Bitumen content in %	4.62	4.54
8. Average	4.58	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	31.7	31.7	6.6	93.4	90 - 100
19	82.3	114	23.9	76.1	71 - 95
13.2	65.5	179.5	37.6	62.4	56 - 80
4.75	80.4	259.9	54.5	45.5	38 - 54
2.360	51.9	311.8	65.4	34.6	28 - 42
0.300	94.2	406	85.1	14.9	7 - 21
0.075	33.7	439.7	92.2	7.8	2 - 8

SIEVE SIZE	Test 2				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	33.2	33.2	7.0	93.0	90 - 100
19	76.9	110.1	23.1	76.9	71 - 95
13.2	64.2	174.3	36.5	63.5	56 - 80
4.75	84.1	258.4	54.1	45.9	38 - 54
2.360	73.5	331.9	69.5	30.5	28 - 42
0.300	99.8	431.7	90.4	9.6	7 - 21
0.075	25.1	456.8	95.7	4.3	2 - 8

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Email: sapiencebangalore@gmail.com

No: SCE/BBMP/HB/17/2020-2021

Date: 04.06.2021

TEST REPORT ON STABILITY OF MIX

Client	:	: Executive Engineer, RR Nagar Division,BBMP, Bangalore.
Agency	:	: Sri. H B Rajendra, Contractor, Bangalore.
Name of the Work	:	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE - 2019-20-RRN-DIV(03), BBMP, Bangalore.
Type of Mix	:	Dense Graded Bituminous Macadam
Date of Testing	:	04.06.2021

The results of the tests conducted on the Dense Graded Bituminous Macadam mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	9.23	10.85	9 Kn (min)
2	Marshal flow, mm	3.47	2.62	2 – 4
3	Percent air voids in Mineral Aggregate	13.21	14.57	13 – 15
4	Voids in Compacted Mix	3.05	5.61	3 – 6
5	Percent Voids filled with Bitumen	69.67	72.21	65 - 75
6	Density, g/cc	2.26	2.25	--

Note:

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Job No.: SCE/BBMP/HB/17/2020-2021

Date: 04.06.2021

TEST REPORT ON STABILITY OF MIX

Client	:	: Executive Engineer, RR Nagar Division,BBMP, Bangalore.
Agency	:	: Sri. H B Rajendra, Contractor, Bangalore.
Name of the Work	:	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE - 2019-20-RRN-DIV(03), BBMP, Bangalore.
Type of Mix	:	Dense Graded Bituminous Macadam
Date of Testing	:	04.06.2021

The results of the tests conducted on the Dense Graded Bituminous Macadam mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	9.12	10.45	9 Kn (min)
2	Marshal flow, mm	3.06	2.16	2 – 4
3	Percent air voids in Mineral Aggregate	13.53	14.68	13 – 15
4	Voids in Compacted Mix	3.28	5.39	3 – 6
5	Percent Voids filled with Bitumen	70.21	73.42	65 - 75
6	Density, g/cc	2.27	2.25	--

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Ref No.: SCE/BBMP/HB/17/2020-2021

Date: 05.06.2021

TEST REPORT ON STABILITY OF MIX

Client	:	: Executive Engineer, RR Nagar Division,BBMP, Bangalore.
Agency	:	: Sri. H B Rajendra, Contractor, Bangalore.
Name of the Work	:	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE 2019-20-RRN-DIV(03), BBMP, Bangalore.
Type of Mix	:	Dense Graded Bituminous Macadam
Date of Testing	:	05.06.2021

The results of the tests conducted on the Dense Graded Bituminous Macadam mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	9.63	10.57	9 Kn (min)
2	Marshal flow, mm	2.14	3.69	2 – 4
3	Percent air voids in Mineral Aggregate	13.38	14.41	13 – 15
4	Voids in Compacted Mix	3.11	5.23	3 – 6
5	Percent Voids filled with Bitumen	69.77	73.13	65 - 75
6	Density, g/cc	2.27	2.25	--

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Ref No: SCE/BBMP/HB/17/2020-2021

Date: 05.06.2021

TEST REPORT ON STABILITY OF MIX

Client	:	: Executive Engineer, RR Nagar Division,BBMP, Bangalore.
Agency	:	: Sri. H B Rajendra, Contractor, Bangalore.
Name of the Work	:	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE - 2019-20-RRN-DIV(03), BBMP, Bangalore.
Type of Mix	:	Dense Graded Bituminous Macadam
Date of Testing	:	05.06.2021

The results of the tests conducted on the Dense Graded Bituminous Macadam mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	9.27	10.52	9 Kn (min)
2	Marshal flow, mm	3.14	2.37	2 – 4
3	Percent air voids in Mineral Aggregate	13.19	14.21	13 – 15
4	Voids in Compacted Mix	3.07	5.51	3 – 6
5	Percent Voids filled with Bitumen	66.58	71.26	65 - 75
6	Density, g/cc	2.26	2.27	--

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Ref No: SCE/BBMP/HB/17/2020-2021

Date: 07.06.2021

TEST REPORT ON STABILITY OF MIX

Client	:	**: Executive Engineer,** RR Nagar Division,BBMP, Bangalore.
Agency	:	**: Sri. H B Rajendra,** Contractor, Bangalore.
Name of the Work	:	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE - 2019-20-RRN-DIV(03), BBMP, Bangalore.
Type of Mix	:	Dense Graded Bituminous Macadam
Date of Testing	:	07.06.2021

The results of the tests conducted on the Dense Graded Bituminous Macadam mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	9.36	10.92	9 Kn (min)
2	Marshal flow, mm	3.07	2.25	2 – 4
3	Percent air voids in Mineral Aggregate	13.16	14.23	13 – 15
4	Voids in Compacted Mix	3.49	5.87	3 – 6
5	Percent Voids filled with Bitumen	70.12	74.01	65 - 75
6	Density, g/cc	2.27	2.25	--

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Ref No: SCE/BBMP/HB/17/2020-2021

Date: 07.06.2021

TEST REPORT ON STABILITY OF MIX

Client	:	: Executive Engineer, RR Nagar Division,BBMP, Bangalore.
Agency	:	: Sri. H B Rajendra, Contractor, Bangalore.
Name of the Work	:	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE - 2019-20-RRN-DIV(03), BBMP, Bangalore.
Type of Mix	:	Dense Graded Bituminous Macadam
Date of Testing	:	07.06.2021

The results of the tests conducted on the Dense Graded Bituminous Macadam mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	9.61	10.32	9 Kn (min)
2	Marshal flow, mm	3.43	2.49	2 – 4
3	Percent air voids in Mineral Aggregate	13.02	14.17	13 – 15
4	Voids in Compacted Mix	3.28	5.53	3 – 6
5	Percent Voids filled with Bitumen	69.46	72.61	65 - 75
6	Density, g/cc	2.27	2.26	--

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No: SCE/BBMP/HB/17/2020-2021

Date: 08.06.2021

TEST REPORT ON STABILITY OF MIX

Client	:	: Executive Engineer, RR Nagar Division,BBMP, Bangalore.
Agency	:	: Sri. H B Rajendra, Contractor, Bangalore.
Name of the Work	:	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE - 2019-20-RRN-DIV(03), BBMP, Bangalore.
Type of Mix	:	Dense Graded Bituminous Macadam
Date of Testing	:	08.06.2021

The results of the tests conducted on the Dense Graded Bituminous Macadam mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	9.22	10.95	9 Kn (min)
2	Marshal flow, mm	3.57	2.26	2 – 4
3	Percent air voids in Mineral Aggregate	13.12	14.75	13 – 15
4	Voids in Compacted Mix	3.85	5.16	3 – 6
5	Percent Voids filled with Bitumen	69.78	72.91	65 - 75
6	Density, g/cc	2.26	2.25	--

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Job No.: SCE/BBMP/HB/17/2020-2021

Date:14.06.2021

TEST REPORT

Client	:	**: Executive Engineer,** RR Nagar Division,BBMP, Bangalore.
Agency	:	**: Sri. H B Rajendra,** Contractor, Bangalore.
Name of the work	:	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE - 2019-20-RRN-DIV(03), BBMP, Bangalore.
IS Code	:	IS 73:2013, IS 1203:1978(RA 2008), IS 1205:1978(RA 2009), IS 1208:1978(RA 2009), IS 1209:1978(RA 2009)
Source of location	:	Hot mix Plant, Bangalore, VG 30
Date of testing	:	14.06.2021

The results of the tests conducted on the bitumen sample using for Bituminous Concrete

Sl. No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	56	Min 45
2	Softening point, ^{0}C	61	Min. 47
3	Ductility at 27^{0}C, cm	> 100	Min. 40
4	Flash Point, ^{0}C	265	Min. 220

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Job No: SCE/BBMP/HB/17/2020-2021

Aggregate Impact Value

Date: 14.06.2021

Client	: Executive Engineer, RR Nagar Division,BBMP, Bangalore.
Agency	: Sri. H B Rajendra, Contractor, Bangalore.
Name of the Work	Comprehensive development of Roads and Drains in Ward no 17 Rajarajeshwari Nagara Assembly Constituency Under PACKAGE - 2019-20-RRN-DIV(03), BBMP, Bangalore.
BIS Code	IS 2386(Part 4):1963
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Bituminous Concrete
Date of Testing	14.06.2021

Sl No.	Details	Test No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	383	385	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	89	87	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	294	298	
4	Aggregate Impact value = percent fines 100* (W_2/W_1) percent	23.24	22.60	22.92

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Concrete is 24%(MORTH table no.500.16)

Note:

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2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

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